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ABSTRACT

This issue, the second of a two-part series on gender equity, presents strategies that nontraditional programs around the country have found to be helpful in combating the problems of educational and occupational segregation by sex. Described in detail is the Outreach Equity Non-Traditional Program located at the Florida Advanced Technology Center at Brevard Community College. Strengths of the Florida program include active, personal, direct recruitment, complete support services, interagency collaboration, and job placement and follow-up programs. Four other programs are profiled: the Women in Machining (WIM) Training Program in Massachusetts, the Women in Technology Project at Vermont Technical College, the It's High Time for High Tech Career seminars in Missouri, and the Techno-Fear Fair at Ashland Community College in Kentucky. The key elements of these successful programs include the following: (1) extensive and active recruitment programs; (2) strong intra- and interagency collaboration; (3) a complete range of student support services; (4) an integrated curriculum that includes hands-on training and varied high-tech activities; (5) adequate work experience opportunities, effective job placement services, and a follow-up program; and (6) having nontraditional students meet nontraditional role models. Twelve recruitment strategies and 13 retention strategies for nontraditional students are suggested. (KC)

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TASPP BRIEF

Technical Assistance for Special Populations Program

Volume 5 Number 1

WORKING TOGETHER FOR SEX EQUITY: NONTRADITIONAL PROGRAMS THAT MAKE A DIFFERENCE

by Esmeralda S. Cunanan and Carolyn Maddy-Bernstein

This issue of the BRIEF is the second of a two-part series on the topic of gender equity. While TASPP BRIEF Volume 4, Number 1 focused on PROBLEMS of educational and occupational segregation by sex, this BRIEF presents STRATEGIES that non-traditional programs around the country have found to be helpful in combating these problems.

An estimated 46% of women in the workforce earn wages below the poverty level compared to 27% of the men (Wider Opportunities for Women, 1990). Changes in the economic status of women and the increasing number of women in the workplace call for the expansion of educational and career opportunities for women and girls. Equity efforts that influence women's career planning, attitudes towards work, vocational aspirations and education, and family role expectations are crucial to the advancement of young women today.

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 responds to the evolving make-up of today's workforce and complexities of the workplace by setting aside funds for programs designed to eliminate sex-bias and stereotyping in vocational education and to promote enrollments in non-traditional occupational (NTO) career programs. A number of states, in accordance with the 1990 Perkins Act provisions and in response to Title IX of the Education Amendments of 1972, have successfully implemented gender equity programs designed to enhance awareness of non-traditional trades, and to provide students, particularly women and girls, an opportunity to enter higher paying non-traditional careers. This BRIEF highlights a 1992 National Exemplary Program Serving Non-Traditional Students recognized by TASPP as well as other successful sex equity initiatives across the country.

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Outreach Equity Non-Traditional Program (PAVE - Promoting Access to Vocational Education): Exemplary Vocational Program Serving Non-Traditional Students

The Outreach Equity Non-Traditional Program located at the Florida Advanced Technology Center—a state-of-the-art facility at Brevard Community College, Cocoa, Florida— works to support the success of Brevard County residents pursuing non-traditional occupations (NTO) that will lead to self-sufficiency. NTO students have access to a variety of associate and certificate programs leading to high-wage occupations including computer programming and analysis, drafting and design technology, electronics engineering technology, and chemical instrumentation technology. These programs are designed to meet the local demand for highly-skilled workers. Brevard County is located on the "Spacecoast" of Florida with many high technology firms and a rapidly growing population that can benefit from exposure and training in non-traditional education.

The Outreach Equity Non-Traditional Program was recognized as a 1992 National Exemplary Program because it possesses most of the components research has shown to be most effective in meeting the needs of special population groups. While the program has been successful in increasing the academic and occupational achievement of its female participants, the staff continue to evaluate and refine the following dimensions of the program: recruitment, formative and summative assessment, career guidance and counseling, curriculum, staff development, support services, placement, and follow-up services.

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Program Strengths

Recruitment

A major strength is the active, personal, and direct recruitment of students into non-traditional occupational (NTO) education. The following are deliberate steps in Outreach Equity recruitment efforts:

- producing and distributing Outreach materials that promote NTO careers and education. Flyers, posters, and brochures are distributed to vocational/technical schools, public schools, businesses, and community;
- conducting formal presentations relevant to NTO careers and education to targeted groups of high school students and welfare recipients; and
- conducting informal presentations including on-going activities such as referral contacts; one-on-one counseling; utilization of video set-ups; internal community college networking with students, administration staff, instructors; and county school networking with local secondary educators and potential students.

Systematic and intensive recruitment measures have proven to be more effective than more passive approaches (like mailings and name exchanges). *As of December, 1992, the program had 89 students enrolled in its different NTO programs of study and 55 students in its NTO preparatory programs.*

Support Services

Another program strength is the availability of a complete support/service package for participating students. The program trainees benefit from the following:

- financial assistance in the form of tuition, books/tools, child care, and/or transportation;
- student support group activities including informal networking of the members of the NTO Networking Club and compiling an NTO phone exchange list that encourages peer networking and sharing opportunities;
- counseling potential students on their strengths and weaknesses and assisting them to match their attributes to NTO educational programs and providing comprehensive career/educational planning sessions by certified professionals in the area of counseling and advisement;
- mentoring by NTO role models from the business sector; andtutoring students who need this assistance.

Intra and Interagency Collaboration

Collaboration, the foundation of Outreach Equity, thrives within Florida Advanced Technology Center/Brevard Community College (FATC/BCC), the local Brevard County School District (secondary), the state-level office of the Equity Administration, and other colleges. The Outreach Equity staff work closely with a number of organizations and tap resources that enhance post-graduation student placement.

Job Placement and Follow-Up Programs

Outreach Equity forges **effective and strong partnerships with non-traditional firms, local businesses, and community organizations**. It designs innovative means of informing potential employers about its program and NTO students and graduates. Prospective employers are actively involved in every phase of the project. Local business partners who are part of an active Advisory Board discuss, plan, and often assist in implementing Outreach Equity programs and activities.

A key component in the success of Outreach Equity is the presence of a **strong work base** in Brevard community that offers NTO students **various career and work opportunities.** The program has established affiliation with firms to create a network of employers that can be drawn upon for good job placement. In some instances, students are placed even before graduation. The BCC Placement Office provides NTO students professional assistance including resume preparation, interview practice sessions, career counseling, and successful job placements. In addition to this service, the Outreach Equity Program Coordinator conducts a follow-up survey of graduates and non-graduates. Careful and systemic follow-up after placement is critical in the success of NTO programs. *All women completers of the program from July to December, 1992 had been successfully placed.*

(For more information about Outreach Equity, contact the program coordinator, Donna Phelan at Brevard Community College, Florida Advanced Technology Center, 250 Grassland Road S.E., Palm Bay, FL 32909 or call her at (407) 951-1060 Ext. 2021.)

Other Model Equity Programs

Several states have developed and implemented programs as a result of federal and state equity initiatives. The following are selected programs which feature some successful strategies:

In Massachusetts . . .

The Women In Machining (WIM) Training Program

The WIM Training Program is part of the machining occupations training program at the Massachusetts Career Development Institute (MCDI) in Springfield, Massachusetts. The program provides occupational education to low income youth and adults including dislocated workers. The participants in the program include a large number of women, people of color, and linguistic minorities. The following are some of WIM's outstanding program features (McGraw, 1991; Warner, 1989):

- a self-paced education program lasting 20-40 weeks;
- a variety of support services including English as a Second Language (ESL) courses, remedial math and reading classes plus child care services;
- teaching of blueprint reading, drafting, math, and quality control;
- hands-on training consisting of work on milling, lathe, grinding, and computer numerical control (CNC) machines; and
- an open entry policy that allows students to enroll at any time.

To support the women participants in the program, WIM staff conduct the following specific strategies (Warner, 1989):

(1) **Shop tours for trainees with employers willing to participate in the program.** Trainees receive first-hand information about possible workplaces which allows them to distinguish between large and small shops.

(2) **Biweekly support groups which provide women the opportunity to discuss issues related to training, job search, or their family.** Women benefit from the discussion of issues on sexual harassment, their families' reactions to training, child care, fears, goals, and information about the industry. These meetings also establish or strengthen networking among women.

(3) **In-class guest speakers to talk with men and women in training.** Shop owners and apprenticeship and union officials serve as resource people by speaking on the varied career opportunities available to successful trainees. Women graduates of the program are invited to share their work experiences and to offer encouragement to new students.

(4) **Mentors spend time with one or two trainees.** Typically, mentors spend at least an hour each month with students discussing barriers to women entering machining and strategies to overcome those barriers, their feelings about being in a non-traditional setting, how working in the trade affects their lives, and their future plans and goals.

(5) **Women complete internships with local employers.** Women gain practical, hands-on experience from internships. It is also an opportunity for employers hesitant about hiring women to see that women can work successfully in the shop environment. The internship consists of a six-week period in which a student alternates weekly between the job site and training center.

(Robert Forrant, assistant director for Machine Action Project (MAP), can be contacted for more information about WIM at 1176 Main St., Springfield, MA 01103, telephone number (413) 781-6900.)

In Vermont . . .

Women in Technology (WIT) Project

The WIT Project, located at Vermont Technical College, was initiated in 1986 when the college administration recognized that only a small number of women enroll in technical majors. The mission of the project is to encourage young women to pursue technical careers where women are underrepresented and to persuade them to stick with math and science through high school. To realize its mission, WIT underscores the following:

- educating young women about technical careers;
- providing female role models;
- introducing girls to women scientists, engineers, and technicians;
- discouraging traditional occupational stereotyping; and
- increasing teachers' awareness of gender equity in the classroom.

WIT Programs

To achieve these objectives, the WIT Project offers the following five programs:

1. **Summer Technology Camp**: A 5-day residential camp for 7th and 8th grade girls to explore math, science, engineering, and technology through hands-on workshops.
2. **Math and Science Institute**: A follow-up to the Summer Technology Camp which features four days of intensive and comprehensive math and science workshops.
3. **Speakers Bureau**: Approximately 85 women engineers, scientists, technicians, and architects talk to classes (K-12) or groups about their field.
4. **Shadow Days**: High school girls accompany a woman at VTC or in industry. Shadowing allows the girls to experience technical education and work.
5. **Girl Scouts Computer Day**: Experienced faculty at VTC assist girl scouts in the computer and robotics labs, which also helps them to earn their Computer Fun Badge.

(For additional information, contact Amy Emler-Shaffer, WIT director, at Vermont Technical College, Randolph Center, Vermont 05061, telephone number (802) 728-3391 ext. 305.)

In Missouri . . .

It's High Time for High Tech Career

Each fall, high school sophomore girls attend the **It's High Time for High Tech Career** seminars at East Central College in Union, Missouri, and Jefferson College in Hillsboro, Missouri to learn about non-traditional high-tech careers. The girls who come from the 13 surrounding counties are selected based on a strong interest and ability in math and science. The seminars are sponsored by the Mineral Area College Consortium.

Activities include (McBride-Bass, 1993):

- meeting motivational futurist speakers, other role models, and prospective employers;
- working in small groups designed to give the girls valuable career information;
- experiencing interactive activities in telecommunications, lasers, robotics, computer-aided drafting (CAD), and computer numerical control (CNC); and
- taking part in a high-tech laser show.

Many of the 150 high school sophomore girls who have attended these seminars over the last three years are now enrolled in advanced math classes and have learned that a high-tech career is a viable and satisfying option for them.

In Kentucky . . .

Techno-Fear Fair

Ashland Community College holds a 40-hour workshop on non-traditional occupations every year. The workshop gives the non-traditional exploration efforts a creative twist by having students take part in a math, science, and computer program called the **Techno-Fear Fair.** To reduce students' fears of high-anxiety topics, the Techno-Fear Fair features activities such as a gambling casino (to demonstrate the concept of probability), calculating wallpaper amounts, planning a trip (calculating mileage, planning a budget), playing computer Jeopardy, and completing a program evaluation on the computer (McBride-Bass, 1993).

Several non-traditional occupational (NTO) programs have made a difference in the entry of women in non-traditional careers. The selected NTO programs demonstrate how such programs and other gender equity efforts can provide comprehensive education, employment, and career services to non-traditional students. These successful NTO programs share the following key elements:

- extensive and active recruitment program;
- strong intra and interagency collaboration;
- complete range of student support services;
- an integrated curriculum that includes hands-on training and varied high-tech activities;
- adequate work experience opportunities, effective job placement services, and a follow-up program are in place;
- NTO students meet NTO role models; and

The **Center for Education Research and Development**, University of Central Florida, College of Education suggests the following strategies for the recruitment and retention of students in non-traditional occupational (NTO) training programs:

Recruitment Strategies

Develop summer orientation programs in which males participate in traditionally female programs and females participate in traditionally male trade areas.

Advertise in school publications inviting females to call for information about a traditionally male program.

Encourage female students who are currently enrolled in non-traditional occupational (NTO) programs to assist recruiters during high school recruitment fairs.

Compile a listing of financial aid assistance available to females interested in entering non-traditional programs.

Include representations of females in audio-visual, instructional, and orientation materials used during recruitment fairs and career days.

Identify and visit female students who are potential students in non-traditional programs prior to their enrollment in high school.

During recruitment fairs, address the fear of peer disapproval with females who are potential non-traditional program students.

Encourage parents to play a strong role in supporting their daughter's career choice.

Arrange job-site visits and experimental work experiences to introduce female students to non-traditional careers.

Design curriculum for career classes at the junior level to reflect a variety of occupations.

Establish a mentor network for women interested in entering non-traditional occupations.

Provide employability skills information through presentations in required high school vocational courses in order to reach all women students in target programs.

Retention Strategies

Send introductory letters to female students in non-traditional programs to welcome them and apprise them of the support services available.

Assist students in identifying one person (relative, friend, instructor) who is supportive of their non-traditional career path.

Provide and encourage participation in support groups so that NTO students can meet, share problems, concerns, and successes.

Disseminate monthly and quarterly newsletters to all females enrolled in NTO programs.

Offer shadowing experiences with non-traditional workers in the field.

Encourage student participation in related professional seminars and state and national vocational organizations.

Eliminate any stereotypical instructional materials from the classroom.

Offer stamina-building and weight lifting classes to female students in NTO programs.

Offer tutoring to students in NTO programs who may need to "catch-up" due to lack of preparation for the subject matter.

Establish a policy which advises students to meet with an advisor before withdrawing from a NTO program.

Enforce fair and consistent discipline, dress standards, safety regulations, achievement expectations, and grading procedures for all students.

Provide on-site child care, transportation, and assistance with textbooks and other required educational materials, tools, and uniforms.

Sensitize teachers to the effects of bias, stereotyping, and discrimination on students.

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PRE-AVA WORKSHOP

The Office of Special Populations of the National Center for Research in Vocational Education, University of California, Berkeley will conduct a pre-AVA conference entitled **"Making A Difference: Exemplary Vocational Special Needs Programs."** The workshop will focus on vocational programs for special needs youth and adults and will feature the following:

- **Presentations by national leaders in the field of vocational education for special populations**
- **Presentations by practitioners from Exemplary Vocational Special Needs Programs**
- **Secondary and postsecondary programs targeting students with disabilities, students who are disadvantaged, and those in programs considered nontraditional for their gender**
- **The latest resources concerning special populations served in vocational programs**

The workshop will be held **December 2-3, 1993 in Nashville, Tennessee.** Activities will begin at 1:00 p.m., Thursday, December 2 and continue through 12:00 noon Friday, December 3.

For registration information, **CONTACT: Dr. Carolyn Maddy-Bernstein, Director, or Dr. Zipura Burac, Program Coordinator.**

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